

REMARKS

Claims 18-35 are pending and under consideration in the above-identified application.

Claims 1-17 were previously cancelled.

In the Office Action of March 17, 2010, claims 18-35 were rejected under 35 U.S.C. § 103(a).

With this response, no claims are amended.

I. 35 U.S.C. § 103 Obviousness Rejection of Claims

Claims 18-35 were rejected under 35 U.S.C. § 103(a) as being purportedly unpatentable over *Gee*. (US 2,630,378) in view of *Wright et al.* (US 5,141,823). The Examiner's rejection is traversed.

In relevant part, independent claims 18, 26 and 27 recite water and diesel fuel being separately preheated to a temperature near the critical temperature of water before being fed by separate feeds into a SCW reactor where the water is placed into a supercritical state within the SCW reactor and where the SCW reactor reforms the diesel fuel into a synthesis gas comprising a mixture of hydrogen and carbon monoxide and outputs a synthesis gas.

This is clearly unlike *Gee* which fails to teach or even fairly suggest feeding water and diesel fuel to a SCW reactor where the water and diesel fuel have been separately preheated to "a predetermined temperature equal to or greater than the critical temperature of water" "where the water is placed into a supercritical state within the SCW reactor" and "the SCW reactor reforms the diesel fuel into a synthesis gas comprising a mixture of hydrogen and carbon monoxide," as recited in claim 1. Instead, *Gee* discloses burning preheated hydrocarbon in a combustion chamber and then injecting steam and oxygen into the combustion chamber to capture the

hydrogen produced by the combustion of the hydrocarbon. See, U.S. Pat. No. 2,630,378, Col. 5, 1. 10-21. This cannot be fairly viewed as feeding water and diesel fuel to a SCW reactor where the water and diesel fuel have been separately preheated to “a predetermined temperature equal to or greater than the critical temperature of water” “where the water is placed into a supercritical state within the SCW reactor” and “the SCW reactor reforms the diesel fuel into a synthesis gas comprising a mixture of hydrogen and carbon monoxide,” as recited in claim 1, because *Gee* merely discloses **burning a hydrocarbon in a combustion chamber** and then using steam, not supercritical water, to capture hydrogen produced by the **combustion of the hydrocarbon**. Further, *Gee* only discloses preheating the hydrocarbon to a temperature of 200-800 degrees F without disclosing preheating water.

Wright fails to disclose anything pertaining to a SCW reactor, much less water and diesel fuel being fed into a SCW reactor at “a predetermined temperature equal to or greater than the critical temperature of water where the water is placed into a supercritical state within the SCW reactor” and “the SCW reactor reforms the diesel fuel into a synthesis gas comprising a mixture of hydrogen and carbon monoxide” and outputs said synthesis gas.

As the Applicant’s specification discloses, by providing a system where water and diesel fuel are separately preheated to a temperature equal to or greater than the critical temperature of water before being fed into a SCW reactor where the water is placed into a supercritical state within the SCW reactor and where the SCW reactor reforms the diesel fuel into a synthesis gas comprising a mixture of hydrogen and carbon monoxide and outputs said synthesis gas, the SCW reactor operates in a more efficient manner with less of a requirement on the SCW reactor resulting in faster production of hydrogen. See, Original Application, at pg. 11, line 20 to pg. 12, line 2.

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Therefore, *Gee* and *Wright*, either alone or in any known combination, fail to teach or suggest all of the limitations of independent claims 18, 26 and 27, and the Applicants respectfully request that the rejection of claims 18, 26 and 27 be withdrawn. Because claims 19-25 and 28-35 depend from and include all of the limitations of at least one of claims 18, 26 or 27, *Gee* and *Wright* also fail to teach or suggest each of the elements of claims 19-25 and 28-35. As such, the Examiner's rejection of each of claims 18-35 should be withdrawn.

II. Conclusion

In view of the above remarks, Applicant submits that claims 18-35 are clearly allowable over the cited prior art, and respectfully requests early and favorable notification to that effect.

Applicant petitions the Commissioner for Patents to extend the time for responding to the Office Action dated March 17, 2010 by 3 months for a fee of \$1,110.00, paid by credit card, so that the period for response is extended to September 17, 2010 under 37 C.F.R. § 1.136. The Commissioner is hereby authorized to charge any additional fees which may be required, to Account No. 19-3140.

Respectfully submitted,

Dated: September 17, 2010 By: /Timothy M Nitsch/ _____
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